clinical tests. It may be supplemented by instrumental tests that help to better understand the origin and evolution under treatment.
The aim of rehabilitation in patients with multiple sclerosis is determined by the level of impairment. In less affected patients, an improvement can be expected in balance. Specific rehabilitation program seems to be more accurate than non-specific training programs. Cognitive and motor impairments are the most limiting factors in the most advanced stages of the diseases.

http://dx.doi.org/10.1016/j.rehab.2014.03.1105

CO28-005-e

Self care programs and multiple sclerosis: A systematic literature review

E. Coudeyre[a,*], P. Givron[a], S. Demaille-Wlodyka[b], P. Gallien[c]
[a] *Service de MPR, CHU Hôpital Nord, Clermont-Ferrand, Cébazat, France*
[b] *Service de MPR, Groupe hospitalier de l'institut catholique lillois, France*
[c] *Pôle MPR Saint-Hélier, Rennes, France*
*Corresponding author.

Keywords: Multiple sclerosis; Self care; Review
Objective.– To define the place of patient therapeutic education (PTE) into multiple sclerosis management.
Methods.– Systematic literature review in PubMed and Cochrane Library databases from 1966 to 2010 with the keywords "multiple sclerosis", "self-care", "self-management". Clinical trials and studies in English, French, and literature reviews and practice guidelines are analyzed.
Results.– Several studies concern general health (7 studies), fatigue management (12 studies) or pain (7 studies). There are less studies concerning prevention of falls (1 study), cognitive disorders, mood and behavior (3 studies) and genito-sexual disorders (1 study).
Conclusion.– TPE is part of the management of MS, particularly through the practice of physical activity and fatigue management. It is also essential to validate information content and to develop educational tools for MS patients.

http://dx.doi.org/10.1016/j.rehab.2014.03.1106

CO35-001-e

Characteristics of walking fatigability in multiple sclerosis

E. Allart[a,*], A. Benoît[b], A. Thevenon[b], V. Tiffreau[b], O. Outteryck[c], H. Zephir[c], A. Lacour[c], P. Vermersch[c], A. Blanchard[b]
[a] *CHRU de Lille, Service de Rééducation et Convalescence Neurologiques, Lille cedex, France*
[b] *CHRU de Lille, Service de MPR, Lille cedex, France*
[c] *CHRU de Lille, Service de Neurologie D, Lille cedex, France*
*Corresponding author.

Keywords: Multiple sclerosis; Walking; Fatigability
Objective.– To characterize walking fatigability in Multiple sclerosis (MS) patients.
Methods.– Seventy-six patients (51.1 ± 11 yo; median EDSS = 5, min = 4–max = 6.5) performed the Timed 25-Foot Walk Test (T25FWT), the 2-minute Walk Test (2MWT) and five successive trials at maximum walking speed on a GAITRITE electronic walkway (8 m).
Results.– In the low EDSS group (4–5; $n = 46$), walking fatigability was only observed for the 2MWT (–0.12 m.s^{-1} that is–11% between the first and last quarter of the test). In the high EDSS group, absolute decrease in walking speed was not different compared to the low EDSS group (–0.12 m.s^{-1}), but fatigability was higher relatively to initial walking speed (–19%; $P = 0.018$). Walking distance for the 2MWT was significantly lower in the high EDSS group (72 vs 117 m; $P < 0.001$). In both groups, walking fatigability was mainly due to a decrease in walking cadence.
Discussion.– Absolute gait fatigability seems to be independent of functional status in MS patients, at least for short to middle walking distances. This emphasizes the importance of gait rehabilitation in MS patients.

http://dx.doi.org/10.1016/j.rehab.2014.03.1107

CO35-002-e

Effects of fampridine on walking parameters, upper limb function, fatigue and quality of life in multiple sclerosis

A. Benoît[a,*], A. Blanchard[a], V. Tiffreau[a], A. Thévenon[a], P. Vermersch[b], E. Allart[c]
[a] *Service de MPR, hôpital Swynghedauw, CHRU de Lille, Université Lille Nord de France, Lille, France*
[b] *Service de Neurologie D, hôpital Salengro, CHRU de Lille, Université Lille Nord de France, Lille, France*
[c] *Service de Rééducation et Convalescence Neurologique, hôpital Swynghedauw, CHRU de Lille, Université Lille Nord de France, Lille, France*
*Corresponding author.

Keywords: Multiple sclerosis; Fampridine; 4-aminopyridine; Walking; Quality of life
Objective.– To assess efficacy of fampridine on walking parameters, hand function, fatigue and quality of life (QoL) in patients with multiple sclerosis (MS).
Methods.– Hundred and eleven consecutive patients eligible for fampridine treatment were evaluated before and after 2 weeks (W2) of treatment, and finally after 3 months (M3) for responders. Response criteria were defined as an improvement of at least 15% in the Timed-25-Foot-Walk (T25FW), the 2-Minute Walk Test (2MWT) or the MS Walking Scale (MSWS-12). Moreover, we performed an analysis of spatio-temporal gait parameters (GAITRITE), and assessments of fatigue (Visual Analog Scale (VAS), hand function (Nine Hole Peg Test) and QoL (SF-12).
Results.– Eighty-five patients (76.6%) were found to be responders, improving T25FW by 33.6% at W2 (vs 4.8% in non-responders) and 31.8% at M3, 2MWT by 38.4% (vs8.5%) and 35.6% and MSWS by 18%. Furthermore, responders showed an amelioration of fatigue severity ($P < 0.01$), hand function ($P < 0.05$) and QoL ($P < 0.001$).
Discussion.– In responders, fampridine improves walking, but also other general symptoms and QoL. It could be of interest in the rehabilitation of MS patients.

http://dx.doi.org/10.1016/j.rehab.2014.03.1108

CO35-003-e

Annual fatigue and depression fluctuation in multiple sclerosis patients

D. Bakalidou[a,*], S. Giannopoulos[b], K. Voumvourakis[c]
[a] *Technological Educational Institute of Athens (A.T.E.I/A), Athens, Greece*
[b] *Department of Neurology, School of Medicine, University of Ioannina, Greece*
[c] *National and Kapodistrian University of Athens, Second Department of Neurology, Attikon Hospital, Greece*
*Corresponding author.

Keywords: Multiple sclerosis; Fatigue; Depression; Seasonal variation
Background.– Fatigue and depression are the most common problems in multiple sclerosis (MS) and strong associations have been reported between them in numerous studies. The purpose of the study was to investigate the seasonal variation of fatigue and depression during every season of the year in a Greek sample of MS patients.
Methods.– Forty-five patients with MS participated in the study. Measurements of fatigue and depression were made with fatigue severity scale (FSS) and Beck depression Inventory (BDI) respectively. The measurements were conducted every three months (November, February, May and August) on the last day of each month during a year. Mean value (M) of fatigue for MS patients was ($M = 4.20$ $SE = 0.22$.).
Results.– No significant fluctuation of fatigue and depression were observed in patients with MS. This finding confirms previous reports of fatigue and depression stability on 6-month basis.